Listing of Claims:

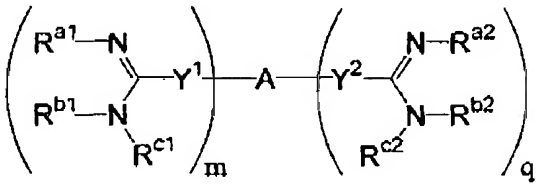
1. **(original)** A method of treating or preventing an amyloid-related disease in a subject comprising administering to said subject a therapeutic amount of an amidine compound.

2. **(cancelled)**.

3. **(original)** The method according to claim 1, wherein said compound is a bis(amidine) compound.

4. **(original)** The method according to claim 1, wherein said compound is a bis(benzamidine) compound.

5. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula X)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

each of Y^1 and Y^2 is independently a direct bond or a linking moiety;
m and q are each independently an integer selected from zero to five inclusive, such that $2 \leq m+q \leq 5$; and

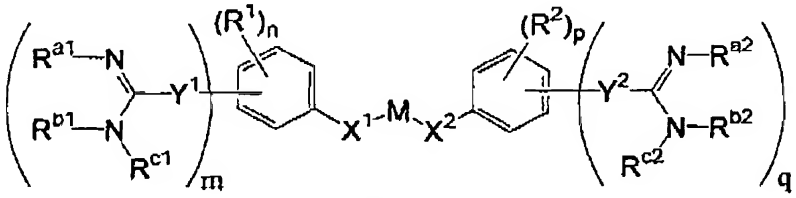
A is a carrier moiety selected from substituted or unsubstituted aliphatic and aromatic groups, and combinations thereof; such that the Y^1 and Y^2 moieties are bonded to an aromatic group;

Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R")_{0-10}NR'R"$, $(CR'R")_{0-10}CN$, NO_2, halogen, $(CR'R")_{0-10}C(halogen)_3$, $(CR'R")_{0-10}CH(halogen)_2$, $(CR'R")_{0-10}CH_2(halogen)$, $(CR'R")_{0-10}CONR'R"$, $(CR'R")_{0-10}(CNH)NR'R"$, $(CR'R")_{0-10}S(O)_{1-2}NR'R"$, $(CR'R")_{0-10}CHO$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(O)_{0-3}R'$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(CR'R")_{0-3}H$, $(CR'R")_{0-10}OH$, $(CR'R")_{0-10}COR'$, $(CR'R")_{0-10}$(substituted or unsubstituted phenyl), $(CR'R")_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R")_{0-10}CO_2R'$, or $(CR'R")_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

and pharmaceutically acceptable salts thereof.

6. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula I)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

each of Y^1 and Y^2 is independently a direct bond or a linking moiety;

each of R^1 and R^2 is independently a hydrogen or a Z group, or two adjacent or proximate R^1

or R^2 groups taken together with the ring to which they are bound form a fused aromatic, heteroaromatic, cycloalkyl, or heterocylic structure;

each of X^1 and X^2 is independently an alkylene group, an oxygen, a NR' group (where R' is hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group), a sulfonamide group, a carbonyl, amide, C_1-C_5 alkylene group, C_2-C_5 alkenyl group, C_2-C_5 alkynyl group, or a sulfur atom, or combinations thereof or a direct bond;

M is an alkylene group, an alkenylene group, an alkynylene group, an alkoxyalkylene group, an alkylaminoalkylene group, a thioalkoxyalkylene group, an arylenedialkylene group, an alkylenediarylene group, a heteroarylenedialkylene group, an arylene group, a heteroarylene group, an oligoethereal or oligo(alkyleneoxide) group, or an arylene-di(oligoalkyleneoxide) group, each of which may be substituted or unsubstituted;

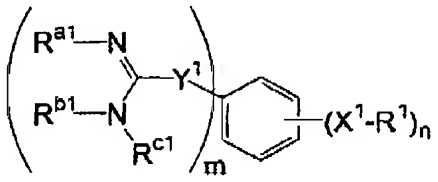
Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3$-C_8 cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

m and q are each independently an integer selected from zero to four inclusive, and n and p are each independently an integer selected from zero to four inclusive, such that m+n=5 and p+q=5, wherein either m or q is at least one;

and pharmaceutically acceptable salts thereof.

7. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula II)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group other than a substituted aryl group or a substituted alkyl group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

Y^1 is a direct bond or a linking moiety;

R^1 is a hydrogen or a Z group, or two adjacent or proximate R^1 groups taken together with the corresponding X^1 groups and the ring to which they are bound form a fused aromatic, heteroaromatic, cycloalkyl, or heterocylic structure;

X^1 is an alkylene group, an oxygen, a NR' group (where R' is hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group), a sulfonamide group, a carbonyl, amide, C_1-C_5 alkylene group, C_2-C_5 alkenyl group, C_2-C_5 alkynyl group, or a sulfur atom, or combinations thereof or a direct bond;

Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$,

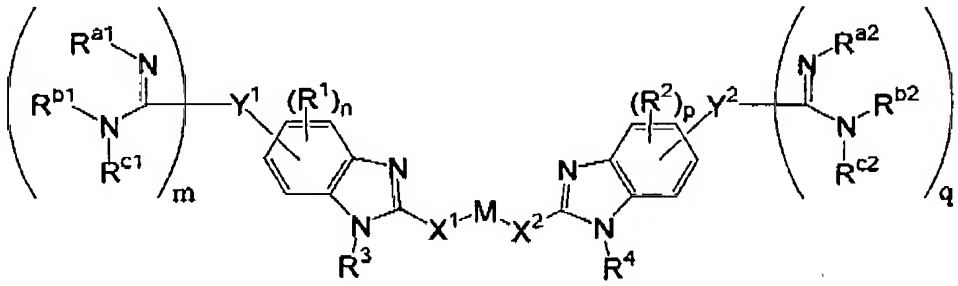
$(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(CR'R")_{0-3}H$, $(CR'R")_{0-10}OH$, $(CR'R")_{0-10}COR'$, $(CR'R")_{0-10}$(substituted or unsubstituted phenyl), $(CR'R")_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R")_{0-10}CO_2R'$, or $(CR'R")_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

m is an integer selected from one to six inclusive, and n is an integer selected from zero to five inclusive, such that m+n=6;

and pharmaceutically acceptable salts thereof.

8. **(currently amended)** The method according to claim 1, wherein said therapeutic compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula III)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

each of Y^1 and Y^2 is independently a direct bond or a linking moiety;

each of R^1 and R^2 is independently a hydrogen or a Z group, or two adjacent or proximate R^1 or R^2 groups taken together with the ring to which they are bound form a fused aromatic, heteroaromatic, cycloalkyl, or heterocylic structure;

each of R^3 and R^4 is independently selected from the group consisting of hydrogen, substituted or unsubstituted straight or branched alkyl, cycloalkyl, carbocyclic, aryl, heterocyclic, and heteroaryl;

each of X^1 and X^2 is independently an alkylene group, an oxygen, a NR' group (where R' is hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group), a sulfonamide group, a carbonyl, amide, C_1-C_5 alkylene group, C_2-C_5 alkenyl group, C_2-C_5 alkynyl group, or a sulfur atom, or combinations thereof or a direct bond;

M is an alkylene group, an alkenylene group, an alkynylene group, an alkoxyalkylene group, an alkylaminoalkylene group, a thioalkoxyalkylene group, an arylenedialkylene group, an alkylenediarylene group, a heteroarylenedialkylene group, an arylene group, a heteroarylene group, an oligoethereal or oligo(alkyleneoxide) group, or an arylene-di(oligoalkyleneoxide) group, each of which may be substituted or unsubstituted;

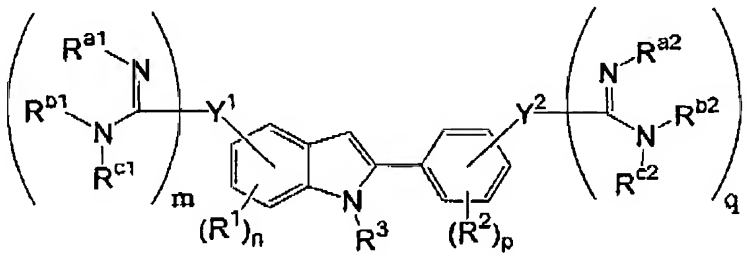
Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3$-C_8 cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R'' are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R'' taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

m, n, p, and q are each independently an integer selected from zero to three inclusive, $m+n\leq 4$, $p+q\leq 4$, and $m+q\geq 1$;

and pharmaceutically acceptable salts thereof.

9. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula IV)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

each of Y^1 and Y^2 is independently a direct bond or a linking moiety;

each of R^1 and R^2 is independently a hydrogen or a Z group, or two adjacent or proximate R^1 or R^2 groups taken together with the ring to which they are bound form a fused aromatic, heteroaromatic, cycloalkyl, or heterocylic structure;

R^3 is selected from the group consisting of hydrogen, substituted or unsubstituted straight or branched alkyl, cycloalkyl, carbocyclic, aryl, heterocyclic, and heteroaryl;

Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3-C_8$ cycloalkyl),

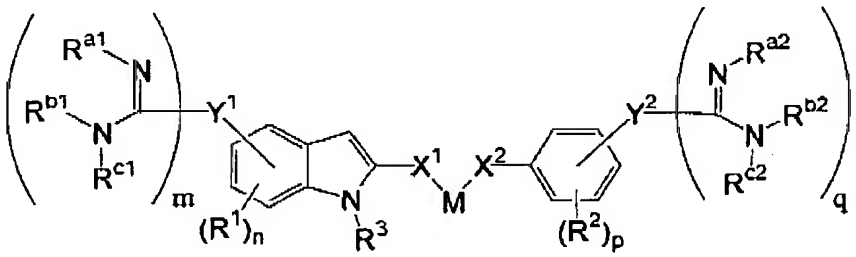
$(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

m and n are each independently an integer selected from zero to three inclusive, p and q are each independently an integer selected from zero to four inclusive, $m+n\leq 4$, $p+q\leq 5$, and $m+q\geq 1$;

and pharmaceutically acceptable salts thereof.

10. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula IVb)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

each of Y^1 and Y^2 is independently a direct bond or a linking moiety;

each of R^1 and R^2 is independently a hydrogen or a Z group, or two adjacent or proximate R^1 or R^2 groups taken together with the ring to which they are bound form a fused aromatic, heteroaromatic, cycloalkyl, or heterocylic structure;

R^3 is selected from the group consisting of hydrogen, substituted or unsubstituted straight or

branched alkyl, cycloalkyl, carbocyclic, aryl, heterocyclic, and heteroaryl;

each of X^1 and X^2 is independently an alkylene group, an oxygen, a NR' group (where R' is hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group), a sulfonamide group, a carbonyl, amide, C_1-C_5 alkylene group, C_2-C_5 alkenyl group, C_2-C_5 alkynyl group, or a sulfur atom, or combinations thereof or a direct bond;

M is an alkylene group, an alkenylene group, an alkynylene group, an alkoxyalkylene group, an alkylaminoalkylene group, a thioalkoxyalkylene group, an arylenedialkylene group, an alkylenediarylene group, a heteroarylenedialkylene group, an arylene group, a heteroarylene group, an oligoethereal or oligo(alkyleneoxide) group, or an arylene-di(oligoalkyleneoxide) group, each of which may be substituted or unsubstituted;

Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3$-C_8 cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

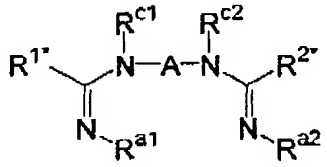
R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

m and n are each independently an integer selected from zero to three inclusive, p and q are each independently an integer selected from zero to four inclusive, $m+n\leq 4$, $p+q\leq 5$, and $m+q\geq 1$;

and pharmaceutically acceptable salts thereof.

11. **(currently amended)** The method according to claim 1, wherein said compound is selected according to the following Formula~~, such that amyloid fibril formation or deposition,~~

~~neurodegeneration, or cellular toxicity is reduced or inhibited~~:



(Formula V)

wherein each R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} is independently a hydrogen, a Z group, or R^{a1} and R^{b1} or R^{a2} and R^{b2} are both taken together along with the nitrogen atoms to which they are bound to form a ring structure;

A is a carrier moiety selected from substituted or unsubstituted aliphatic and aromatic groups, and combinations thereof; such that the Y^1 and Y^2 moieties are bonded to an aromatic group;

Z is a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid;

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group;

and pharmaceutically acceptable salts thereof.

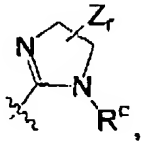
12. **(currently amended)** The method according to claim 1, wherein said amyloid–related disease is ~~an Aβ amyloid related disease~~ **associated with amyloid-β**.

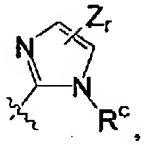
13. **(original)** The method according to claim 1, wherein said amyloid–related disease is Alzheimer's disease, cerebral amyloid angiopathy, Down's syndrome, or inclusion body myositis.

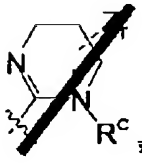
14. **(original)** The method according to claim 1, wherein said amyloid–related disease is type II diabetes.

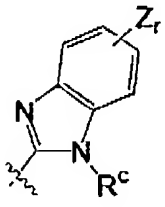
15. **(original)** The method according to claim 1, where said subject is a human.

16. **(currently amended)** The method according to claim 5, wherein said ring structure is selected from the following:


, wherein r is an integer from zero to 4 inclusive,


, wherein r is an integer from zero to 2 inclusive,


~~, wherein r is an integer from zero to 6 inclusive,~~ or


,wherein r is an integer from zero to 4 inclusive, and

Z and R^c ~~are as defined in claim 5~~ **are each independently a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl**

group, $(CR'R")_{0-10}NR'R"$, $(CR'R")_{0-10}CN$, NO_2, halogen, $(CR'R")_{0-10}C(halogen)_3$, $(CR'R")_{0-10}CH(halogen)_2$, $(CR'R")_{0-10}CH_2(halogen)$, $(CR'R")_{0-10}CONR'R"$, $(CR'R")_{0-10}(CNH)NR'R"$, $(CR'R")_{0-10}S(O)_{1-2}NR'R"$, $(CR'R")_{0-10}CHO$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(O)_{0-3}R'$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(CR'R")_{0-3}H$, $(CR'R")_{0-10}OH$, $(CR'R")_{0-10}COR'$, $(CR'R")_{0-10}$(substituted or unsubstituted phenyl), $(CR'R")_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R")_{0-10}CO_2R'$, or $(CR'R")_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid; and

R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group.

17. **(original)** The method according to claim 5, wherein each of said R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} groups is a hydrogen, hydroxy group, a substituted or unsubstituted C_1-C_8 alkyl or C_1-C_8 alkoxy group.

18. **(original)** The method according to claim 5, wherein each of said R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} groups is an aromatic group or heteroaromatic group.

19. **(currently amended)** The method according to claim 5, wherein each of said R^{a1}, R^{b1}, R^{c1}, R^{a2}, R^{b2}, and R^{c2} groups is a ~~**R^3 group as defined in claim 9**~~ **hydrogen, substituted or unsubstituted straight or branched alkyl, cycloalkyl, carbocyclic, aryl, heterocyclic, or heteroaryl group**.

20. **(original)** The method according to claim 5, wherein each of said Y^1 and Y^2 groups is a linking moiety of less than about 75 molecular weight.

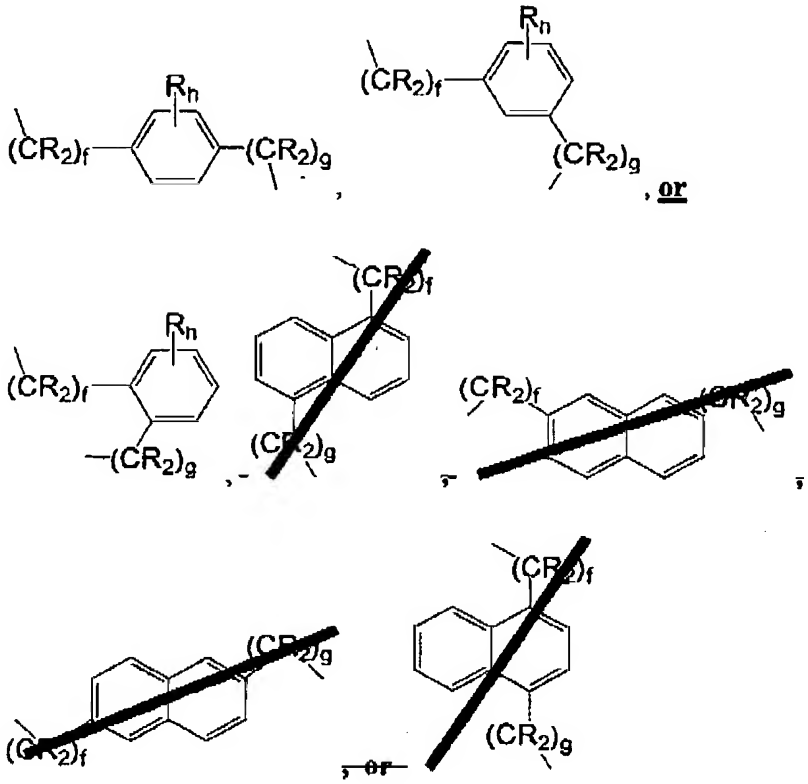
21. **(original)** The method according to claim 5, wherein said Y^1 and Y^2 groups is a direct bond.

22. **(original)** The method according to claim 6, wherein each of said R^1 and R^2 groups is independently a hydrogen, a substituted or unsubstituted C_1-C_8 alkyl group, a substituted or unsubstituted C_1-C_8 alkenyl group, a halogen, a substituted or unsubstituted aryl or heteroaryl group, a substituted or unsubstituted amino group, a nitro group, or a substituted or unsubstituted C_1-C_8 alkoxy group.

23. **(original)** The method according to claim 6, wherein said M group is $-[(CH_2)_sO]_t(CH_2)_s-$, where t is 1 to 6 and s is 2 to 6.

24. **(original)** The method according to claim 6, wherein said M group is a phenylenedialkylene group.

25. **(currently amended)** The method according to claim 6, wherein said M arylenedialkylene group is



wherein each R group is independently a hydrogen or is ~~selected from the group Z as defined in claim 5,~~ **a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R")_{0-10}NR'R"$, $(CR'R")_{0-10}CN$, NO_2, halogen, $(CR'R")_{0-10}C(halogen)_3$, $(CR'R")_{0-10}CH(halogen)_2$, $(CR'R")_{0-10}CH_2(halogen)$, $(CR'R")_{0-10}CONR'R"$, $(CR'R")_{0-10}(CNH)NR'R"$, $(CR'R")_{0-10}S(O)_{1-2}NR'R"$, $(CR'R")_{0-10}CHO$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(O)_{0-3}R'$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(CR'R")_{0-3}H$, $(CR'R")_{0-10}OH$, $(CR'R")_{0-10}COR'$, $(CR'R")_{0-10}$(substituted or unsubstituted phenyl),**

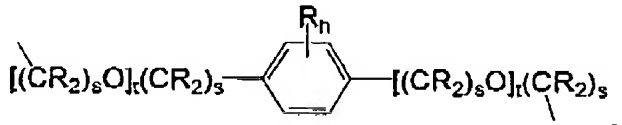
$(CR'R'')_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid; and

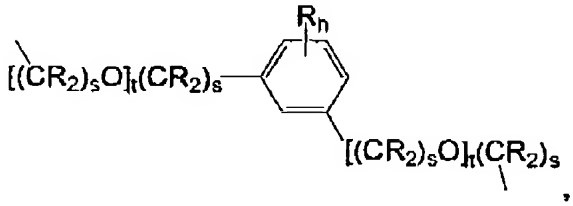
R' and R" are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group; and

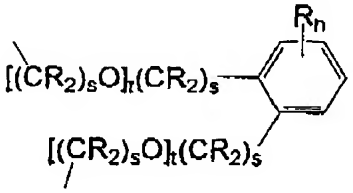
$1 \leq f \leq 8$, $1 \leq g \leq 8$, $0 \leq h \leq 4$.

26. **(original)** The method according to claim 6, wherein said M group is a substituted or unsubstituted C_2-C_8 alkylene group, a substituted or unsubstituted C_1-C_8 alkenylene group, a substituted or unsubstituted C_2-C_8 alkynylene group.

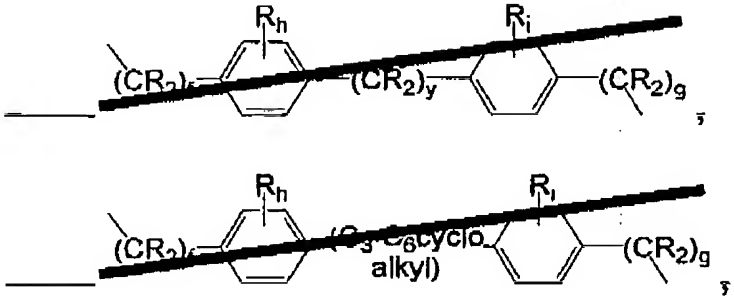
27. **(currently amended)** The method according to claim 6, wherein said M group is







wherein $1 \leq t \leq 6$, $0 \leq s \leq 6$, $0 \leq h \leq 4$, ~~**and each R group is independently a hydrogen or is selected from the group Z as defined in claim 5; or**~~



~~wherein $1 \leq y \leq 10$ (preferably $1 \leq y \leq 4$), $1 \leq f \leq 8$, $1 \leq g \leq 8$, $0 \leq h \leq 4$, and $0 \leq i \leq 4$~~, and

each R group is independently a hydrogen or is ~~selected from the group Z as defined in claim 5~~ a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R")_{0-10}NR'R"$, $(CR'R")_{0-10}CN$, NO_2, halogen, $(CR'R")_{0-10}C(halogen)_3$, $(CR'R")_{0-10}CH(halogen)_2$, $(CR'R")_{0-10}CH_2(halogen)$, $(CR'R")_{0-10}CONR'R"$, $(CR'R")_{0-10}(CNH)NR'R"$, $(CR'R")_{0-10}S(O)_{1-2}NR'R"$, $(CR'R")_{0-10}CHO$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(O)_{0-3}R'$, $(CR'R")_{0-10}O(CR'R")_{0-10}H$, $(CR'R")_{0-10}S(CR'R")_{0-3}H$, $(CR'R")_{0-10}OH$, $(CR'R")_{0-10}COR'$, $(CR'R")_{0-10}$(substituted or unsubstituted phenyl), $(CR'R")_{0-10}(C_3\text{-}C_8$ cycloalkyl), $(CR'R")_{0-10}CO_2R'$, or $(CR'R")_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid; and

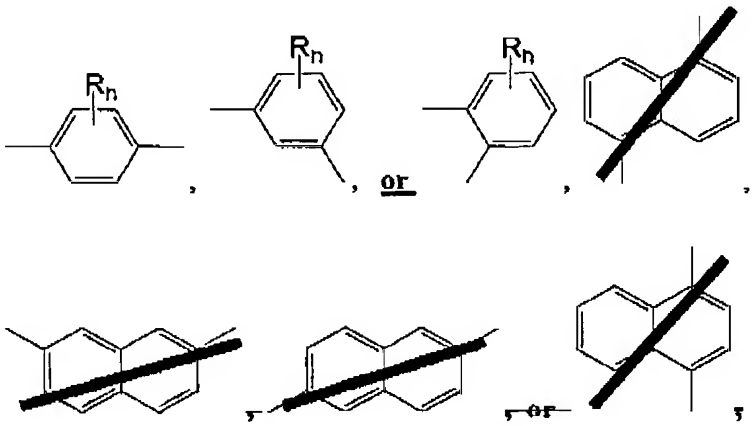
R' and R" are each independently hydrogen, a $C_1\text{-}C_5$ alkyl, $C_2\text{-}C_5$ alkenyl, $C_2\text{-}C_5$ alkynyl, or aryl group, or R' and R" taken together are a benzylidene group or a $\text{-}(CH_2)_2O(CH_2)_2\text{-}$ group.

28. **(cancelled).**

29. **(cancelled).**

30. **(cancelled).**

31. **(currently amended)** The method according to claim 6, wherein said M group is



wherein each R group is independently a hydrogen or is ~~selected from the group Z defined in claim 5,~~ **a substituted or unsubstituted moiety selected from straight or branched alkyl, cycloalkyl, alkoxy, thioalkyl, alkenyl, alkynyl, heterocyclic, carbocyclic, aryl, aryloxy, aralkyl, aryloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $(CR'R'')_{0-10}NR'R''$, $(CR'R'')_{0-10}CN$, NO_2, halogen, $(CR'R'')_{0-10}C(halogen)_3$, $(CR'R'')_{0-10}CH(halogen)_2$, $(CR'R'')_{0-10}CH_2(halogen)$, $(CR'R'')_{0-10}CONR'R''$, $(CR'R'')_{0-10}(CNH)NR'R''$, $(CR'R'')_{0-10}S(O)_{1-2}NR'R''$, $(CR'R'')_{0-10}CHO$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(O)_{0-3}R'$, $(CR'R'')_{0-10}O(CR'R'')_{0-10}H$, $(CR'R'')_{0-10}S(CR'R'')_{0-3}H$, $(CR'R'')_{0-10}OH$, $(CR'R'')_{0-10}COR'$, $(CR'R'')_{0-10}$(substituted or unsubstituted phenyl), $(CR'R'')_{0-10}(C_3-C_8$ cycloalkyl), $(CR'R'')_{0-10}CO_2R'$, or $(CR'R'')_{0-10}OR'$ group, or the side chain of any naturally occurring amino acid; and**

R' and R'' are each independently hydrogen, a C_1-C_5 alkyl, C_2-C_5 alkenyl, C_2-C_5 alkynyl, or aryl group, or R' and R'' taken together are a benzylidene group or a $-(CH_2)_2O(CH_2)_2-$ group; and

$0 \leq h \leq 4$.

32. **(cancelled).**

33. **(cancelled).**

34. **(cancelled).**

35. **(cancelled).**

36. **(cancelled).**

37. **(original)** The method according to claim 2, wherein m=1, n=0, 1, or 2, p=0, 1, or 2, and q=1.

38. **(original)** The method according to claims 5, wherein R^{a1}=R^{a2}, R^{b1}=R^{b2}, R^{c1}=R^{c2}, m=q, n=p, and Y^1=Y^2.

39. **(original)** The method according to claim 6, wherein R^1=R^2, and X^1=X^2.

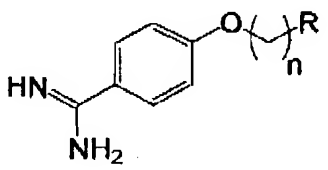
40. **(original)** The method according to claim 5, wherein said pharmaceutically acceptable salt is a hydrohalide salt or a 2-hydroxyethanesulfonate salt.

41. **(cancelled).**

42. **(currently amended)** A pharmaceutical composition for ~~**the treatment of**~~ **for treating or preventing** an amyloid-related disease comprising a compound according to claim 5.

43. **(currently amended)** The method according to claim 5, wherein said linking moiety is $-(CH_2)_n-$ (wherein n is 1, 2, or 3), $-NR^3$ ~~**wherein R^3 is as defined in claim 9**~~, -NH-, -S-, -O-, $-NH-CH_2-$, or -CH=CH-, or combinations thereof; **wherein R3 is selected from the group consisting of hydrogen, substituted or unsubstituted straight or branched alkyl, cycloalkyl, carbocyclic, aryl, heterocyclic, and heteroaryl**.

44. **(currently amended)** A chemical compound according to the formula:



wherein n is an ~~**interger**~~ **integer** from 7 to 10, and R is Br or CO_2H, and pharmaceutically acceptable salts thereof.

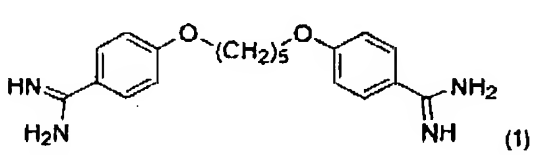
45. **(cancelled).**

46. **(currently amended)** A pharmaceutical composition **for treating or preventing an amyloid-related disease** comprising a **therapeutically effective amount of a** chemical compound according to claim 44.

47. **(original)** The method of claim 1, wherein said amidine compound causes in an Alzheimer's patient a stabilization of cognitive function, prevention of a further decrease in cognitive function, or prevention, slowing, or stopping of disease progression.

48. **(currently amended)** The method according to claim 5, wherein Z is a substituted or unsubstituted moiety selected from straight or branched C_1-C_5 alkyl, C_3-C_8 cycloalkyl, C_1-C_6 alkoxy, C_1-C_6 thioalkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, heterocyclic, carbocyclic, phenyl, phenoxy, benzyl, phenyloxyalkyl, arylacetamidoyl, alkylaryl, heteroaralkyl, alkylcarbonyl, arylcarbonyl, heteroarylcarbonyl, or heteroaryl group, $-NH_2$, -CN, NO_2, F, Cl, Br, I, $-CF_3$, $(CR'R")_{0-3}CONR'R"$, $(CR'R")_{0-3}(CNH)NR'R"$, $(CR'R")_{0-3}S(O)_{1-2}NR'R"$, $(CR'R")_{0-3}CHO$, $(CR'R")_{0-3}O(CR'R")_{0-3}H$, $-SO_3H$, $-CH_2OCH_3$, $-OCH_3$, -SH, $-SCH_3$, -OH, $(CR'R")_{0-3}COR'$, $(CR'R")_{0-3}$(substituted or unsubstituted phenyl), $(CR'R")_{0-3}$(C_3-C_8 cycloalkyl), $-CO_2H$, or $(CR'R")_{0-3}OR'$ group.

49. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of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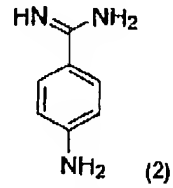
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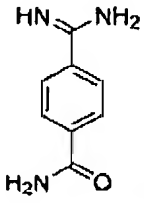
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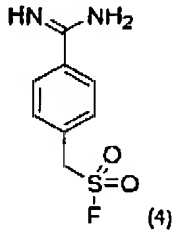
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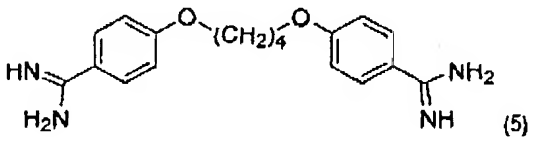
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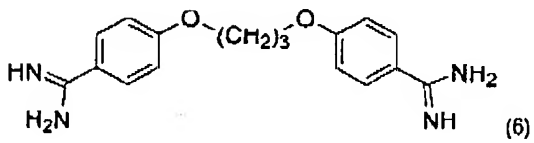
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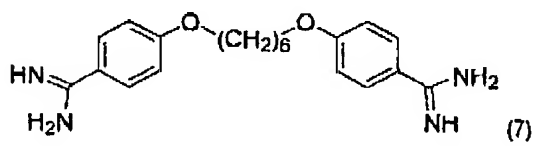
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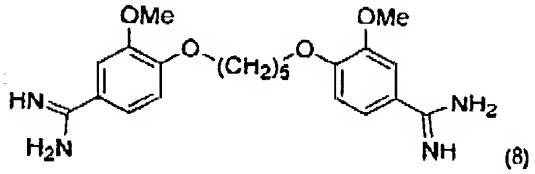
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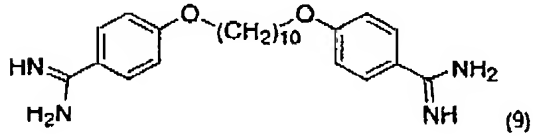
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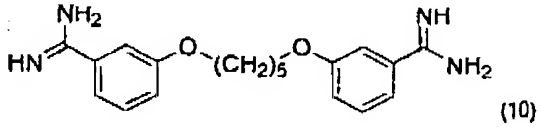
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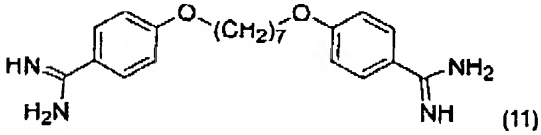
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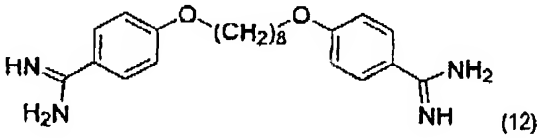
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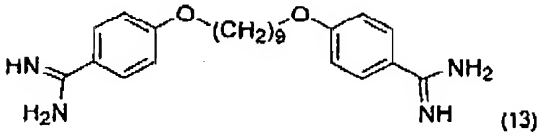
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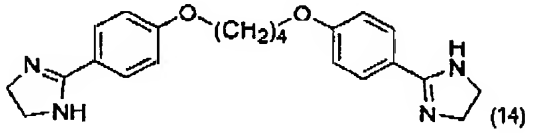
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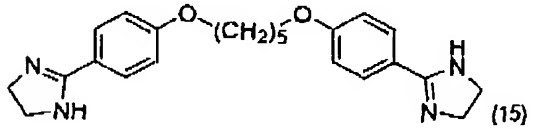
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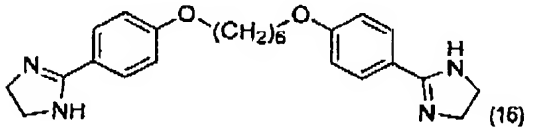
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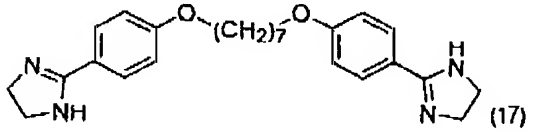
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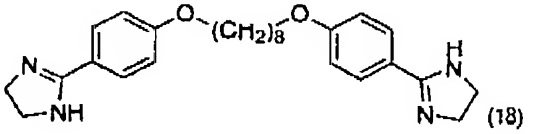
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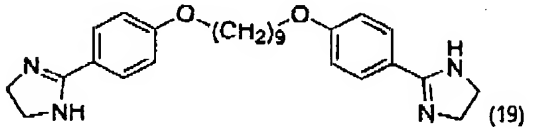
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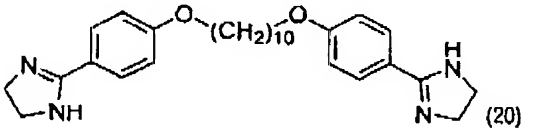
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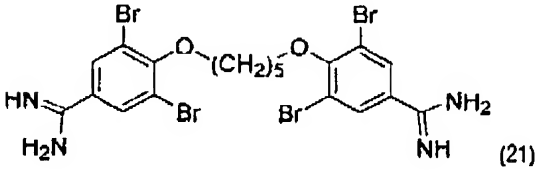
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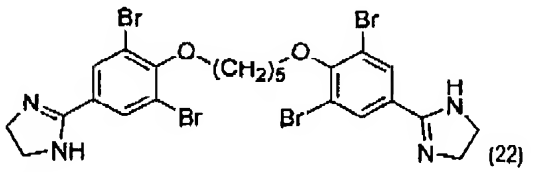
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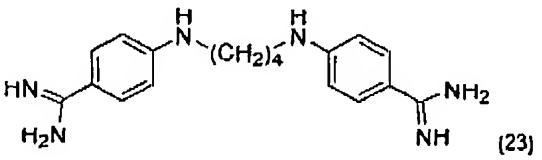
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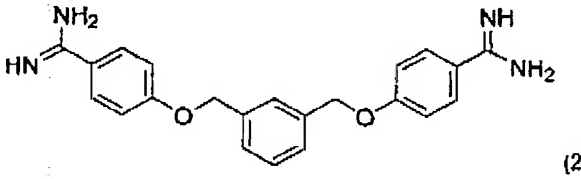
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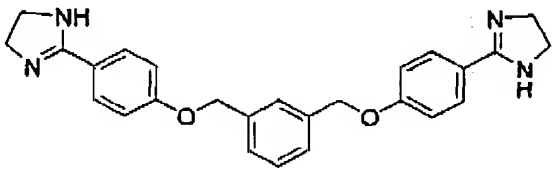

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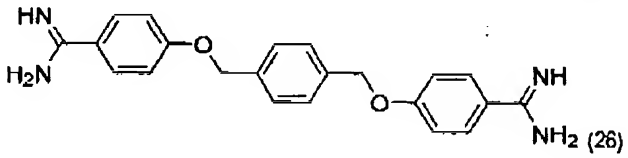

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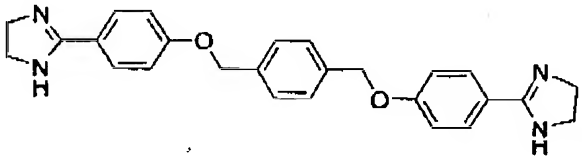

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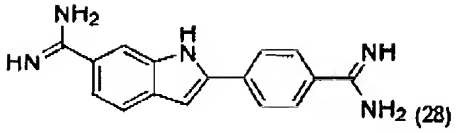

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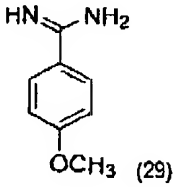
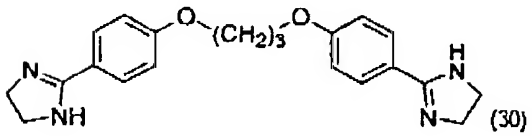


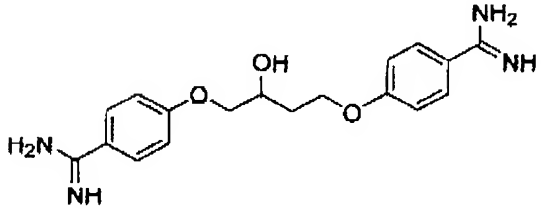
(29)

and pharmaceutically acceptable salts thereof.

50. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of



(30)



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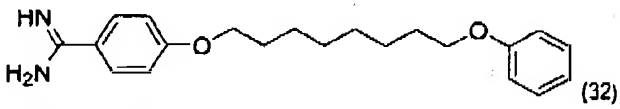
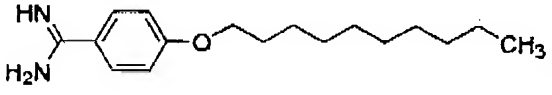


(32)



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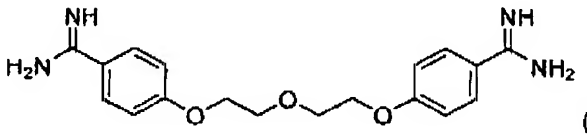
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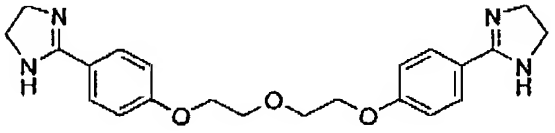
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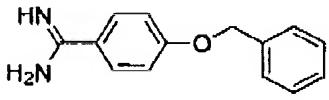
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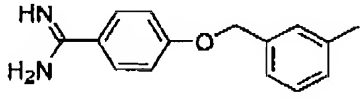
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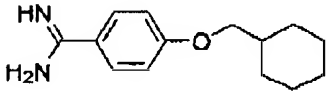
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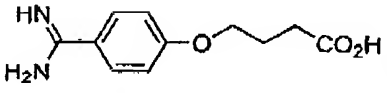
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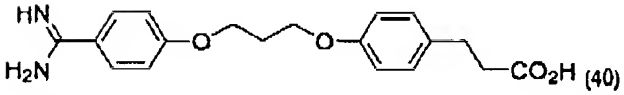
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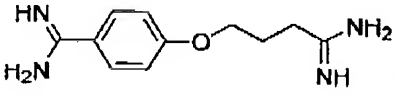
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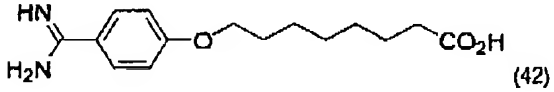
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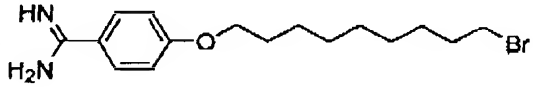
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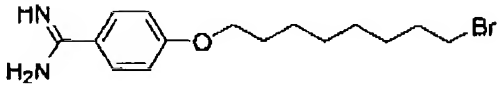
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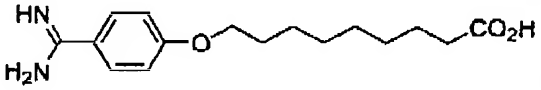
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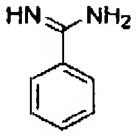
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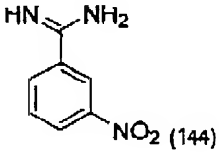
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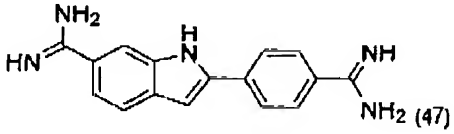
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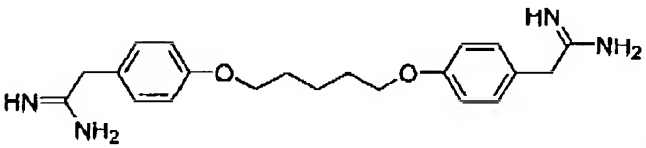
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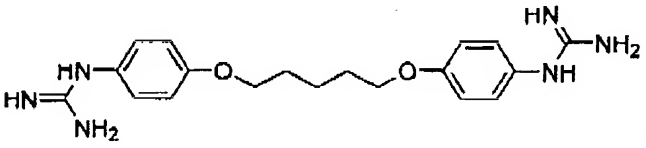
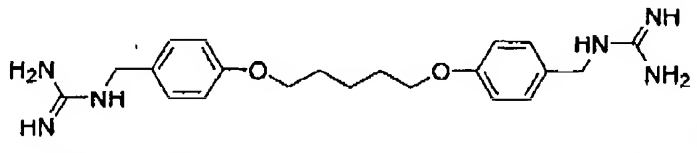

(49)

and pharmaceutically acceptable salts thereof.

51. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of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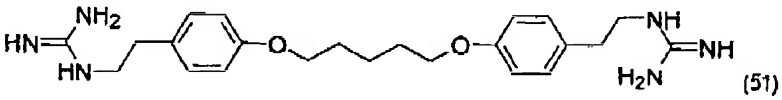
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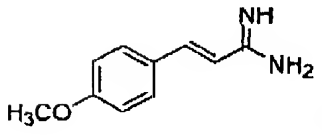
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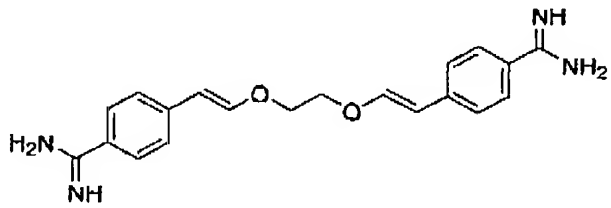
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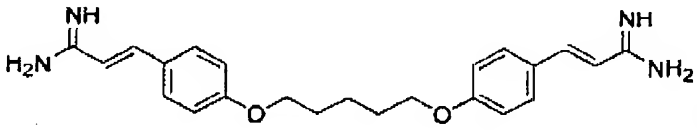
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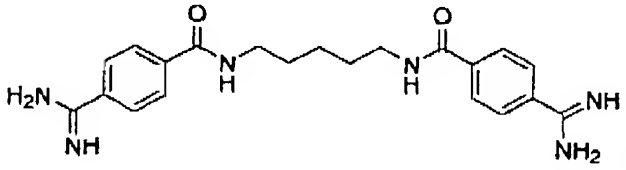
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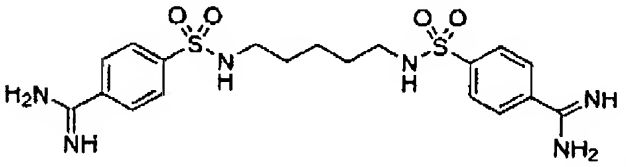
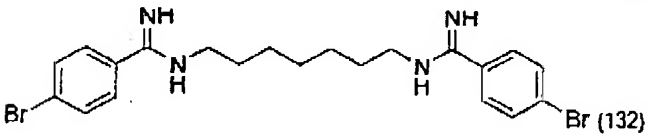
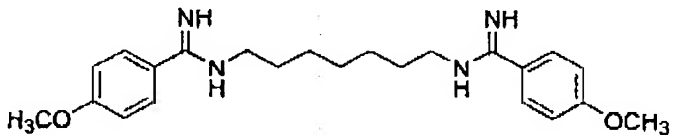

(56)


(132)



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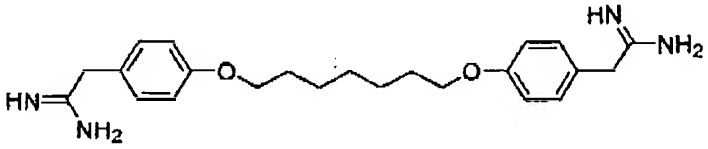

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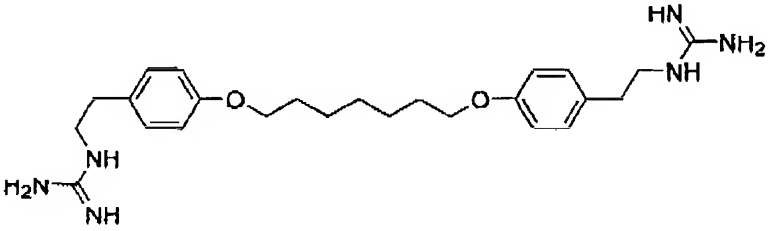
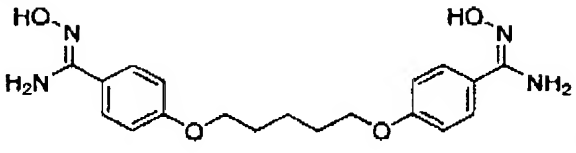


(138)



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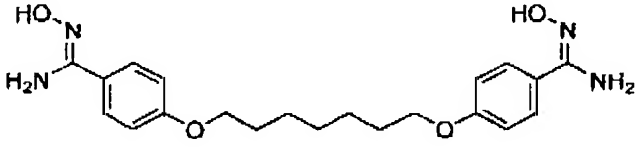

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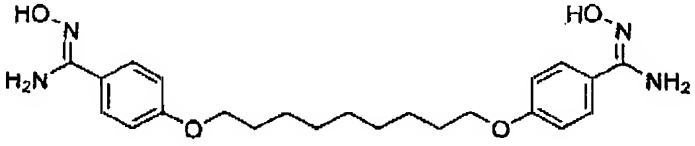
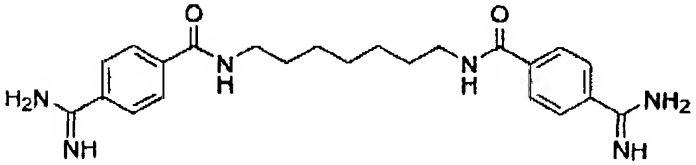
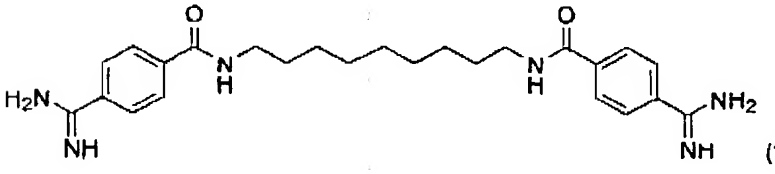


(141)



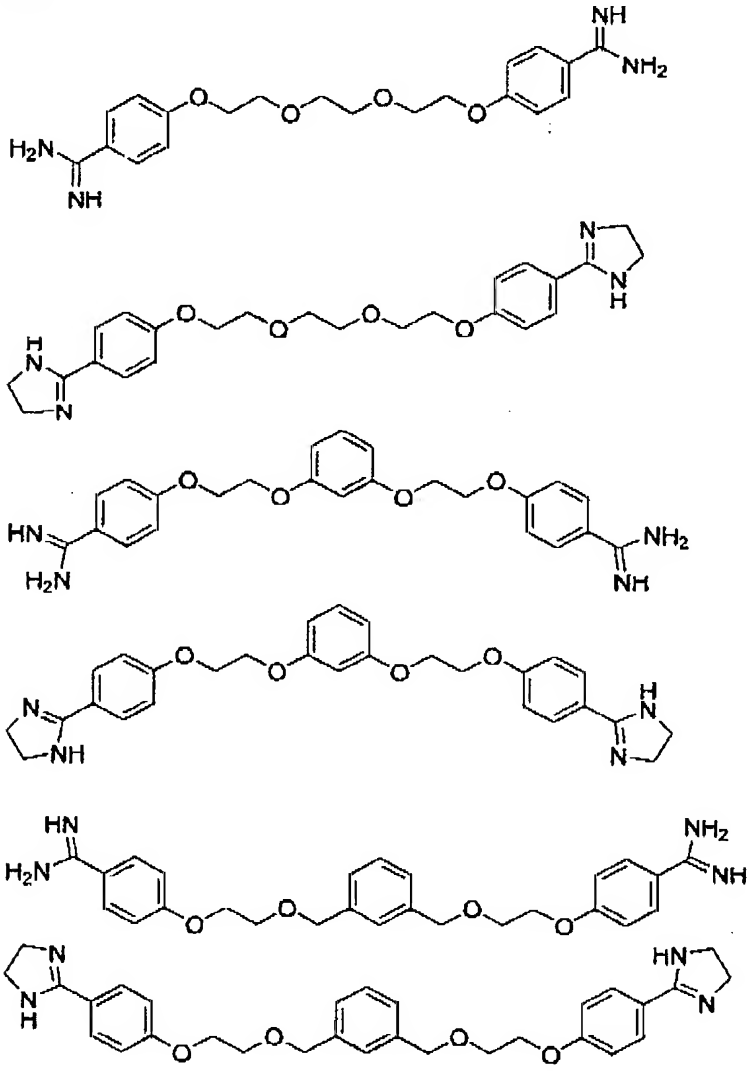
(142)



(143)

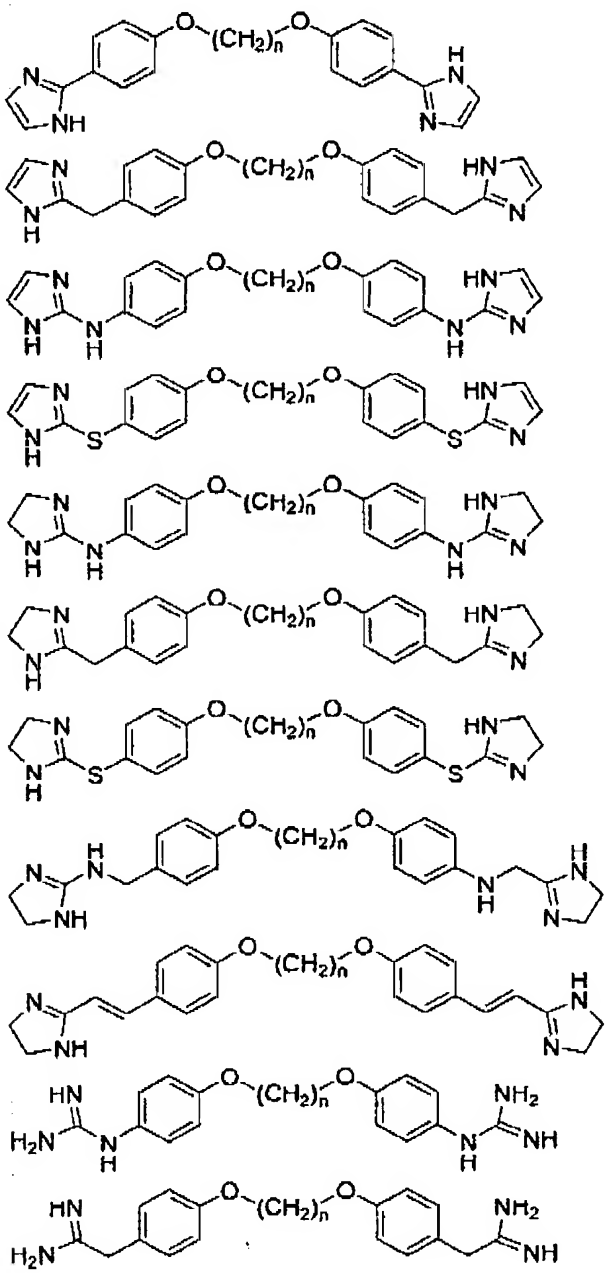
and pharmaceutically acceptable salts thereof.

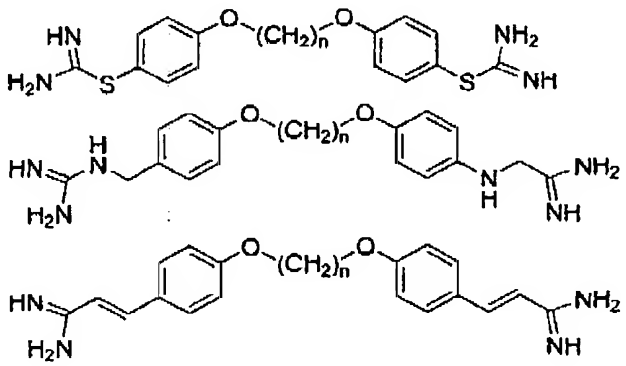
52. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of



and pharmaceutically acceptable salts thereof.

53. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of

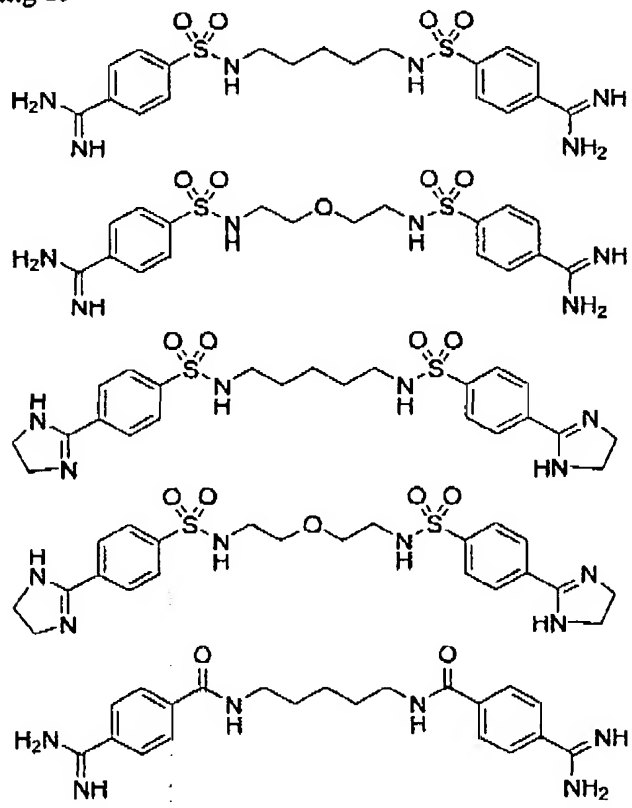


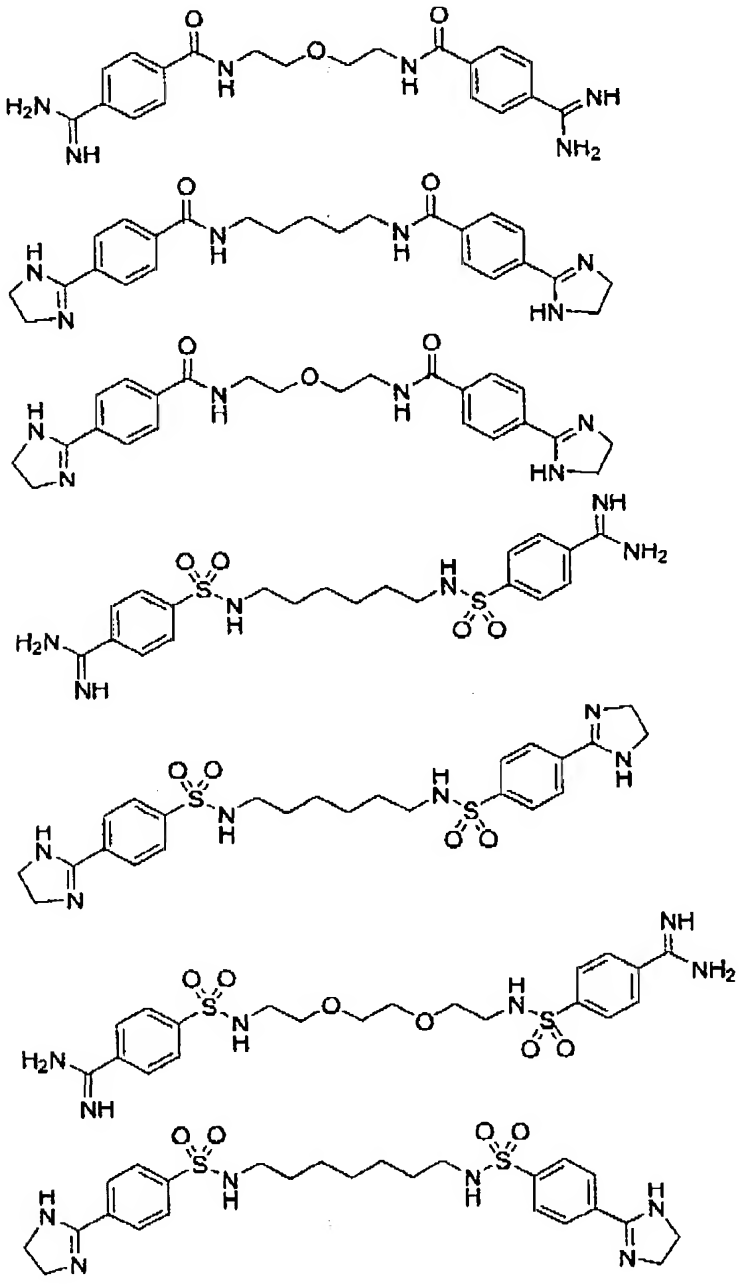


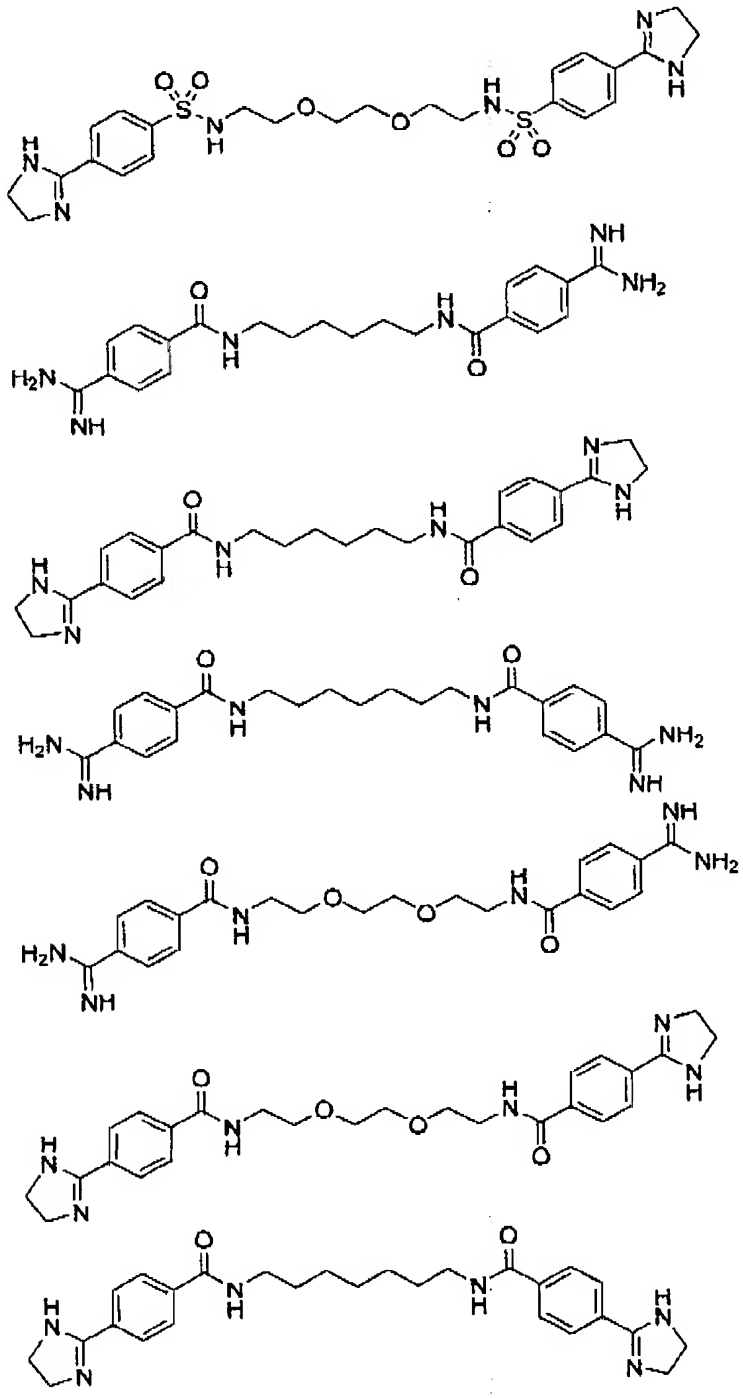
wherein n is an integer from 1 to 12,

and pharmaceutically acceptable salts thereof.

54. **(new)** The method according to claim 1, wherein said compound is selected from the group consisting of





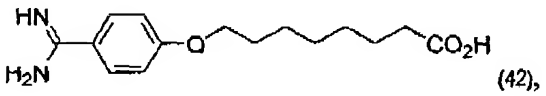


and pharmaceutically acceptable salts thereof.

55. **(new)** The method according to claim 1, wherein said compound is used therapeutically or prophylactically to treat a human in need thereof.

56. **(new)** The method according to claim 5, wherein said compound reduces or inhibits amyloid fibril formation or deposition, neurodegeneration, or cellular toxicity.

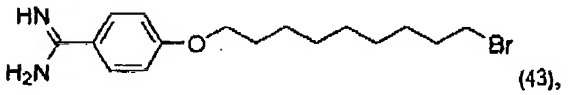
57. **(new)** A chemical compound having the following structure:



(42),

and pharmaceutically acceptable salts thereof.

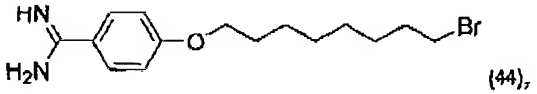
58. **(new)** A chemical compound having the following structure:



(43),

and pharmaceutically acceptable salts thereof.

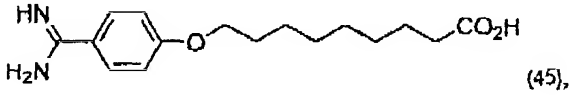
59. **(new)** A chemical compound having the following structure:



(44),

and pharmaceutically acceptable salts thereof.

60. **(new)** A chemical compound having the following structure:



(45),

and pharmaceutically acceptable salts thereof.

61. **(new)** A pharmaceutical composition for treating or preventing an amyloid-related disease comprising a therapeutically effective amount of a chemical compound according to claim 44.